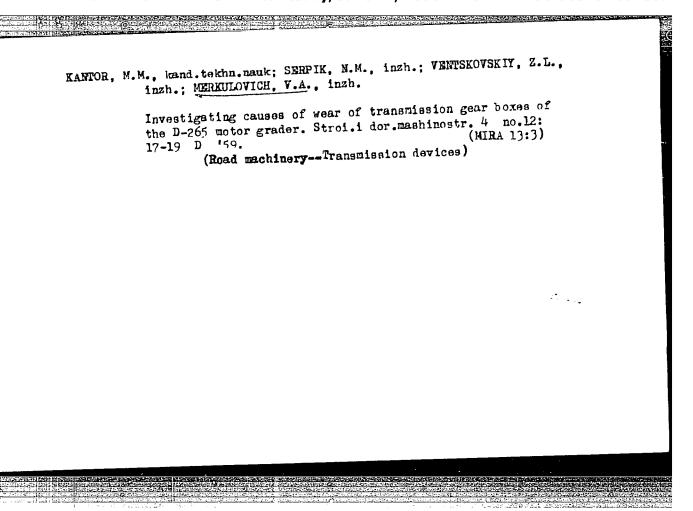
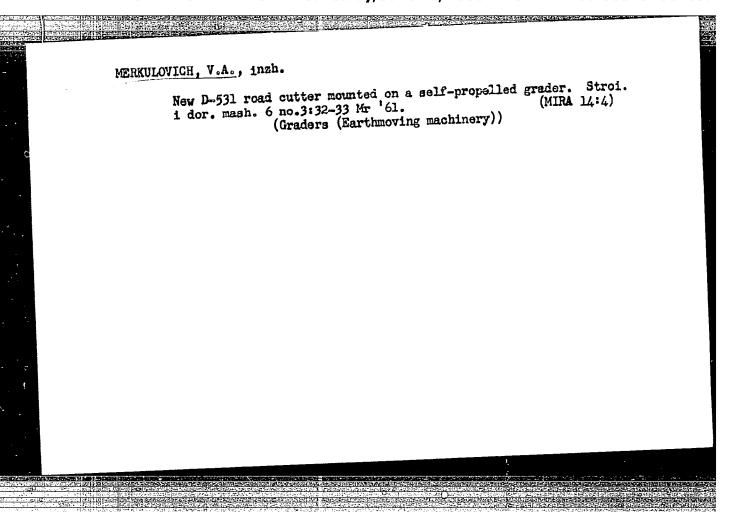
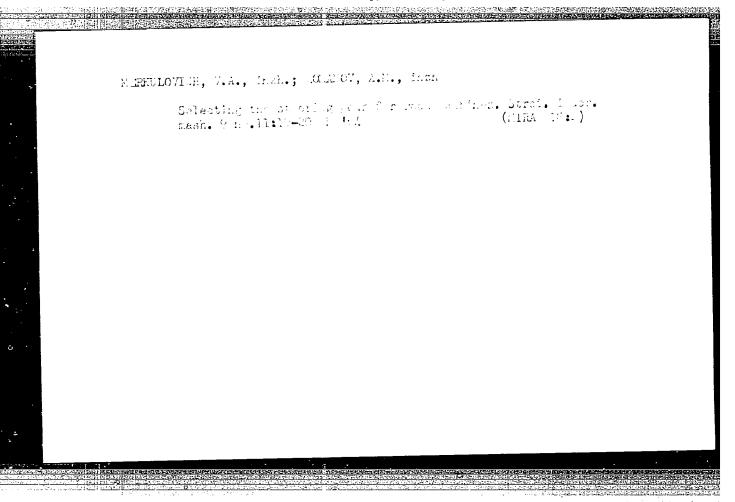


VOSHCHENKO, B.I., inzh.; MERKULOVICH, V.A., inzh. Mixing soil with binders and aggregates by the D-396 and D-1445 ground-crushing and mixing machines. Stroi.i dor.mashinostr. 4 no.10:16-17 0 '59. (MIRA 13:2)







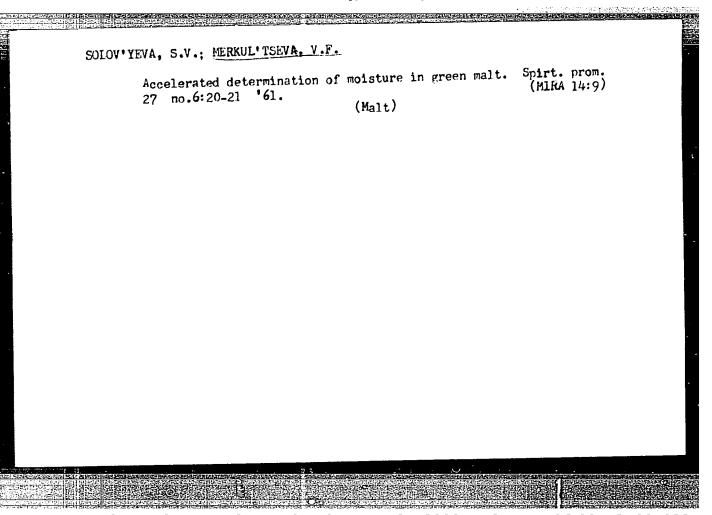
MERBULOW, B.

MERKUICH, B.

Developmental trends toward the complete mechanization of Soviet mines.

p. 371 (Przeblad Gorniczy. Vol. 12, nc. 10, Oct. 1956. Katowice, Poland)

Monthly Index of East European Accessions (EEAI) IC. Vol. 7, no. 2, February 1958



KARLOV, V.I., kand.ist.nauk; MERKULYAYEV, P.A., kand.ist.nauk

Fortieth anniversary of the Great October Socialist Revolution.

1zv. vys. ucheb. zav.; pri. no.1:5-11 '58. (MIRA 11:5)

(Russia--Economic conditions)

POLOZ, K., mekhanik-teploteknnik; MERKUL YEV, G., smennyy teknnik

Excess staif at an enterprise. Sots. trud 7 no.8:129-130 Ag 362. (MIRA 15:10)

1. Kerchenskiy mekhanizirovannyy steklotarnyy zavod Krymskogo soveta narodnogo khozyaystva.

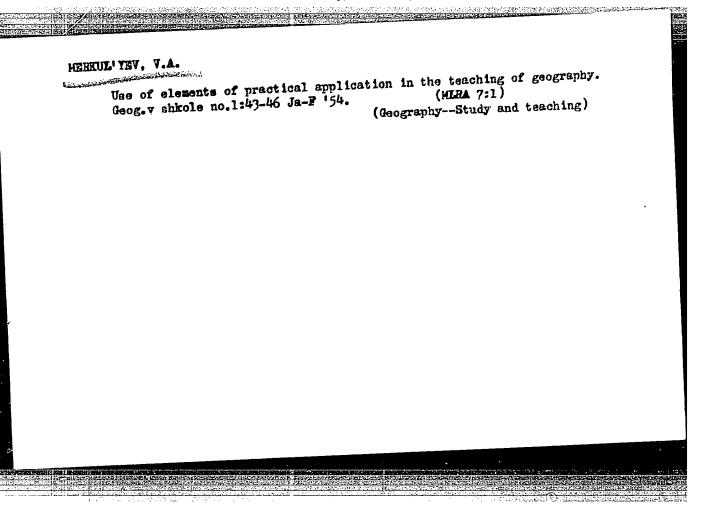
(Kerch Peninsula-Glass manufacture)

MERKUL'YEV, K. V.

Merkul'yev, K. V.

"Automatic measurement and recording of the SO₂ content in turneric acid," Mateiraly Tsentr. nauch.-issled. in-ta bumazh. prom-sti, Issue 37, 1948, p. 155-62

So: U-3566, 15 March 53, (Letopis 'Zhurnal 'nykh Statey, No. 13, 1949)



32000 s/089/62/012/001/003/019

26.2243

AUTHORS:

Antonov, A. V., Granatkin, B. V., Merkul'yev, Yu. A.,

Smolik, Ch. K.

TITLE:

Pulse method study of neutron diffusion and thermalization

in water and ice in a wide temperature range

PERIODICAL: Atomnaya energiya, v. 12, no. 1, 1962, 22 - 29

TEXT: The method, apparatus and results are described, of the investigation of non-steady neutron diffusion in water and ice at 0.5 - 286°C and down to -1960c. The pulse method used has been described by Dardel

(Phys. Rev, <u>96</u>, 1245, 1954) and I. M. Frank. The neutrons, from T(d,n)He4 reactions, were modulated with a repetition frequency of 250 cps at a

pulse duration of 15 $\mu sec.$ The neutrons were recorded with a $B^{10}F^{3}$ counter, the counter pulses were fed to a 20-channel time analyzer (dead time 10 µsec), designed by I. V. Shtranikh, A. Ye. Voronkov, A. M. Volkov and K. P. Dudareva. An apparatus was designed for studying neutron diffusion in water at 0.5, 3, 7, 20, 71, 98, 136, 138, 159, 200, 250 and

Card 1/4

32000 \$/089/62/012/001/003/019 B102/B138

Pulse method study of ...

286°C. The following parameters were measured: neutron life (T) and diffusion coefficient (D), coefficient of diffusion cooling (C) non-diffusion correction (d) (N. Sjöstrand. Arkiv fys. 15, 147 (1959)) transport free path ($\lambda_{\rm tr}$), transport cross section ($\sigma_{\rm tr}$), diffusion length (L) and mean cosine of neutron scattering angle ($\cos \theta$). For water at 21°C the following diffusion parameters were measured: T = 207 ± 7 µsec, D = (0.35 ± 0.01)·10⁵ cm²/sec, C-d = (0.04 - 0.01)·10⁵ cm⁴/sec. The diffusion parameters for ice at -196°C are given in the table. The experimental values were approximated by means of the following formulas:

$$\frac{D(t^{2} \text{ C})}{D(21^{2} \text{ C})} = (0.934 \pm 0.028) +
+ (0.289 \pm 0.009) 10^{-2}t +
+ (0.106 \pm 0.03) 10^{-4}t^{2}.$$
(5)

 $\cos \theta = 1 - \frac{\lambda_s}{\lambda_{tr}} (\lambda_s - \text{scattering mean free path}),$

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Pulse method study of ...

$$\frac{L(t)}{L(22^{\circ}C)} = \frac{1}{\varrho} \left[\frac{t + 273, 1}{294, 1} \right]^{1/2} \times \frac{(C - d)(t)}{(C - d)(21^{\circ}C)} + (0.987 \pm 0.098) + \\
\times \left[\frac{1,0614}{1 + 0.0614 \left[\frac{t + 273, 1}{294, 1} \right]^{1/2}} \right]^{1/2} . \qquad (9) \qquad + (0.61^{\circ}t \pm 0.031) 10^{-3} t + \\
+ (0.48 \pm 0.104) 10^{-4} t^{2}. \qquad (10)$$

$$\varepsilon = \frac{1}{6} \frac{D^{3}}{C} \frac{\overline{\lambda}_{s}}{\overline{v}} \left(1 + \overline{v} \frac{d \ln \overline{\lambda}_{tr}}{d \overline{v}} \right) \times \left(2 \frac{E_{n}}{kT} - 3 \right), \tag{11}$$

(E - energy transferred by one neutron per collision). The heat-exchange constant $\gamma = D^2/C$ was $(3.10 \pm 0.35) \cdot 10^5$ sec⁻¹, $\epsilon = 0.23 \pm 0.07$. Conclusions: Anisotropy in the angular distribution of scattered neutrons increases with temperature. In water at room temperature neutron thermalization satisfies Dardel's theory (Trans. Roy. Inst. Technol. No. 75, 1934) when the deviation of the neutron temperature from equilibrium is only small. In ice at -196°C the neutron gas is in equilibrium with the ice. Equilibrium is established 45 - 75 μ sec after slowing down begins. This

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Pulse method study of ...

slowing-down time is much greater than in water. The authors thank
I. M. Frank for interest, B. V. Makarov, V. M. Gulikov, V. V. Talakvadze,
and Ye. A. Velichenkova for assistance. There are 7 figures, 1 table, and
17 references: 3 Soviet and 14 non-Soviet. The four most recent references to English-language publications read as follows: K. Beckurts.
Symposium on "In Pile Neutron Spectra and Pulsed Neutrons Methods". Denmark, 1960; D. Hughes et al. Phys. Rev., 119, 872 (1960); D. Hughes,
R. Schwards. Neutron Cross Sections. New York, 1958; K. Rockey, S. Skolnik.
Nucl. Sci. Engng, 8, 62 (1960).

SUBMITTED: July 1, 1961

	Table								
•	t, •C	Q, c/cm³	Т, мксек	10 ⁸ CM ³ /Cek	(C-d), 106 cm4/cen	L, c.m	_{մ է լ} , նորո), см	cos 8
	—196	0,917±0,010 —	215±10 222	0,095±0,004 0,105±0,004	0,02±0,01 0,025±0,10	1 43±0,07 1,53±0,08	146±6 132±6	0,224±0,009 0,248±0,010 	0,1 0 <u>4.</u> 0.05

Card 4/4

ANTONOV, A.V.; GRANATKIE, B.V.; MERKUL'YEV, Yn.A.; PUZANCV, V.V.; SMOLIK, Ch.K.

Neutron diffusion for water and ice at temperatures near 0°C and -80°C. Atom. energ. 13 no.4:373-374 0 '62. (MIR/. 15:9)

(Neutrons—Scattering)

MERKUROV, K.; TER-AVANESOV, Yu.

Shop of the chemical combine has been finished in aight months. Stroitel' no.7:3-5 Jl '59. (MEMA 12:10)

1. Clavnyy inzhener tresta Stalinogorskkhimuglestroy (for Merkuroy). 2. Spetsial'nyy korrespondent zhurnala "Stroitel'(for Ter-Avanesov).

(Stalinogorsk--Chemical plants)
(Precast concrete constructions)

MERKUR'YEV, A F.

- 1. A. F. MER'KUR'EV
- 2. USSH (600)
- 4. Bee Culture
- 7. Wintering bees on honeydew honey. Pchelovodstvo 30 no. 1. 1953.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

S/196/61/000/010/028/037 E194/E155

AUTHORS: Pechuro, N.S., Merkur'yev, A.N., Grodzinskiy, E.Ya., and Sokolova, N.I.

TITLE: An investigation of physical-chemical changes occurring in organic media under the influence of electrical discharges. Decomposition of liquid organic media during spark machining of metals

PERIODICAL: Referativnyy zhurnal, Elektrotekhnika i energetika, no.10, 1961, 41, abstract 10K 236. (Symposium "Problems of electrical machining of materials", M., AS USSR, 1960, 14-24)

TEXT; The organic liquids used during spark machining of metals (ligroin, kerosine, oil etc.) are decomposed by electrical discharge. Investigations of the changes in the physico-chemical properties of petroleum products, Synthin and Esthonian shale pitch after prolonged electric spark treatment show extensive decomposition of their organic compounds accompanied by an increase in the content of sulphur components and evolution of acetylene, hydrogen and soot; there is an increase in specific gravity; Card 1/2

An investigation of physical-chemical. E194/E155

viscosity, flash and fire points and refractive index. The investigations were carried out on a laboratory electric spark equipment with a follow-up control system maintaining constant conditions with a capacitance of 12.5-500 microfarads, a voltage of 100-200 V and a current of 1-5 A. The petroleum products were treated for 35 hours and the Synthin and pitch for 20 hours, Characteristics are given of the materials before and after treatment, with information about the influence of the construction and material of electrodes on the evolution of gas and about the possibility of using the treated fluids and gases in the chemical and rubber industries.

ll literature references.

[Abstractor's note: Complete translation.]

Card 2/2

5/856/62/000/000/007/011 E194/E135

Pechuro, N.S., and Merkur'yev, A.N. AUTHORS:

Investigation of the decomposition of organic liquids TITLE:

in transient electric discharges

Problemy elektricheskoy obrabotki materialov. Tsentr. SOURCE:

nauchnoissl. labor. elek. obrab. mat. AN SSSR.

Ed. by B.R. Lazarenko. Moscow, Izd-vo AN SSSR, 1962.

161-191

Although much work has been done on the production of unsaturated hydrocarbons from natural and refinery gas, most acetylene is still made from carbide, which is inconvenient. most promising ways of making acetylene are oxidative and thermal cracking and various processes involving electric discharges. Electrical discharges have mostly been applied to gas, but relatively little has been done on the electrical treatment of organic liquids. Following a review of earlier work, new work and preliminary qualitative results from its first stage are described. A petroleum product with a boiling range of 140-250 °C was cracked by transient low-voltage electric discharges employing Card 1/3

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intermediate conducting contacts in the form of graphite spheres between the main electrodes. The influence of the nature of the intermediate contacts on the output and composition of cracked gas was studied. The laboratory tests were run for up to one hour to avoid errors in assessment of acetylene due to its solubility in the liquid phase. The rectangular reaction vessel was made with transparent plastic; near the bottom of it were six horizontal electrodes of 20 or 40 mm diameter; the intermediate contact was by spheres 5-12 mm in diameter made from various grades of graphite. In principle, the liquid could be circulated but this was not done in the tests described. Supply was from five a.c. welding transformers which could be connected to obtain output voltages ranging from 60 to 300 V. Difficulties in measuring the power output in such a case are discussed. Operation was most stable when the number of intermediate contacts was large (\sim 100), and stable conditions facilitate measurements. The gas evolved was of practically constant composition: acetylene and its about 2-0%; homologues forming 29-32%; $C_n^H_{2n} = 6-11\%$; $C_n^H_{2n} + 2$ and H2, 52-58%.

Card 2/3

Investigation of the decomposition... \$/856/62/000/000/007/011 E194/E135

This composition was virtually independent of the applied voltage in the range 60-300 V. However, the production of gas was more efficient when, for a given voltage, the current was increased, or with higher voltage with a given mean current. The apparatus was run for about 5 hours to obtain a material balance and this showed that about 2.5 kg of liquid feed are required to produce 1 m³ of acetylene. The cracked gas could be used directly to produce acetaldehyde with a satisfactory yield. The liquid phase remaining after treatment is unstable in colour on exposure to heat and light, and there is some increase in specific gravity, refractive index, iodine value and molecular weight. Some sludge forms. There are 7 figures and 3 tables.

Card 3/3

5/856/62/000/000/009/011 E 194/E135

AUTHORS:

Pechuro, N.S., and Herkur'yev, A.N.

TITLE:

A study of the process of gas formation during the decomposition of organic liquids in low-voltage

transient electric discharges

SOURCE:

Problemy elektricheskoy obrabotki materialov. Tsentr.

nauchnoissl. labor. elek. obrab. mat. AN SSSR.

Ed. by B.R. Lazarenko. Moscow, Izd-vo AN SSSR, 1962.

199-208

A high-speed camera developed by B.N. Zolotykh was used to study the process of gas-bubble formation by electric discharges TEXT: through organic liquids. Camera type (KC-1 (SKS-1) made runs of 1 second duration taking 4000 frames per second. The subject was illuminated by lamps to a total wattage of 3.5 kW. Two test cells were made, of transparent plastic: one contained two graphite spherical electrodes with a 3 mm gap bridged by an intermediate contact in the form of a graphite sphere $8-9\,\mathrm{mm}$ diameter; the other had six main electrodes, 20 mm diameter, with five intermediate contacts made of graphite spheres 8 - 9 mm diameter, Card 1/3

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A study of the process of gas ...

5/856/62/000/000/009/011 E194/E135

the arrangement being the same as was used in the study of the decomposition of organic liquids in electric discharges (present collection of articles, 181-191). Tests were made with a petroleum distillate of boiling range 140-250 °C and with ethanol. The voltage ranged from 60 to 180 V. Typical records of gas-bubble formation obtained at different voltages are illustrated and described. The processes were very similar whether ethanol or distillate were used but were much easier to observe with ethanol because less carbon was formed. High-speed films and oscillograms of the process were taken simultaneously with the multi-electrode cell and confirmed that several simultaneous discharges are recorded on the oscillogram as a single impulse. It was also found that gas bubbles and hydraulic shock have considerable influence in displacing the intermediate contacts during discharge. From the simultaneous films and oscillograms preliminary conclusions are drawn concerning the mechanism of discharge initiation and development. One kind of discharge initiation commences with breakdown of a microfilm of liquid dielectric between the intermediate contact and one of the Card 2/3

S/856/62/000/000/009/011
A study of the process of gas ... S/856/62/000/000/009/011

electrodes, the other electrode being in direct contact with the intermediate contact. This contact is broken down and a second channel opens up within 0.25-0.5 milliseconds. In other cases two discharge channels are formed simultaneously within 0.25 millisecs. This seems to occur when the voltage between the electrodes is high enough to break down both microfilms of dielectric simultaneously or when the output of the supply source is such that after the first breakdown there is a considerable increase in the discharge current, which immediately forms a second channel. Energy dissipation in the discharge channels gives rise to high temperatures which decompose the organic liquids with the formation of gaseous products. Under the action of the gas and electromagnetic forces the intermediate contact is forced away from the electrodes, extending both discharge channels, thus increasing the volume of liquid exposed to high temperatures. There are 11 figures.

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5/856/62/000/000/011/011 E194/E135

AUTHORS:

Pechuro, N.S., and Merkur'yev, A.N.

TITLE:

An investigation of transient electrical discharges

used to decompose organic liquids

SOURCE:

Problemy elektricheskoy obrabotki materialov. Tsentr. nauchnoissl. labor. elek. obrab. mat. AN SSSR.

Ed. by B.R. Lazarenko. Moscow, Izd-vo AN SSSR, 1962.

214-219.

During the investigation of the decomposition of organic liquids in transient electric discharges (present collection TEXT: of articles, 181-191) it was decided to take oscillograms of current and voltage during the discharges, using an electromagnetic oscillograph type MNC-2 (MPO-2) with film speeds ranging from 250 to 5000 mm/sec. The open circuit voltage of supply could range from 60 to 300 V and heavy currents could be passed. It was clear from numerous oscillograms that when a single intermediate contact is used the current and voltage curves are very similar to those of a transient a.c. arc. Analysis of the oscillograms shows that there are two cases of initiation and development of interrupted Card 1/ 3

An investigation of transient ...

\$/856/62/000/000/011/011 £194/£135

discharge. In the first case, voltage is applied at the instant when the intermediate contact is directly on the electrodes; if the voltage is high enough the breakdown occurs instantaneously and the voltage falls. If the initial voltage is not high enough, breakdown occurs as soon as it has risen to the breakdown value. In the second case the intermediate contact is away from the electrode when the voltage is applied, and discharge is initiated when it approaches closely to the main electrodes, the actual conditions depending upon the instantaneous value of voltage at that time. Oscillograms were also taken when there were a number of intermediate contacts, and it was found that several discharges could occur simultaneously. In this case oscillograph elements were connected between the various pairs of electrodes with various numbers of intermediate contacts. In general, discharges are transient and follow one another at irregular intervals and they also vary in amplitude. However, on carrying out 100 successive discharges it was found that as the number of intermediate contacts is increased there is a change in the statistical distribution of duration, mean current and energy of individual Card 2/3

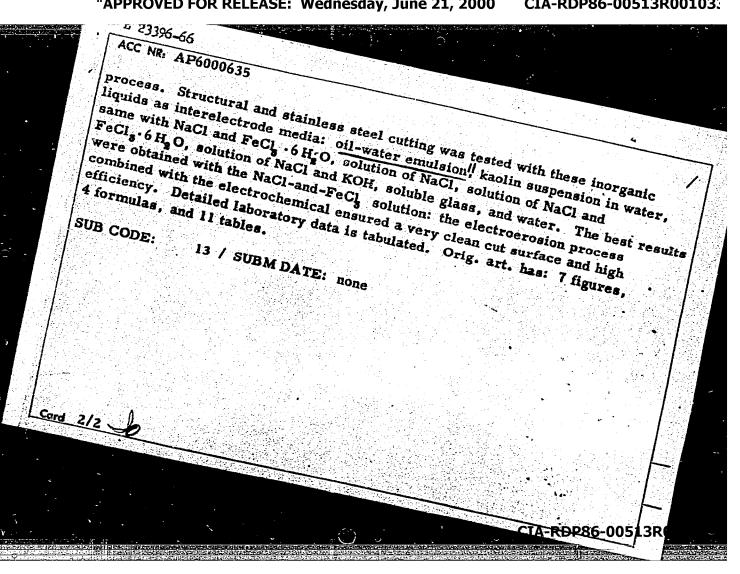
An investigation of transient ...

5/856/62/000/000/011/011 E194/E135

impulses. This suggests that in many cases a number of discharges occur simultaneously, the oscillograms recording only the mean current and voltage. Data are given about the discharge frequencies with various values of supply voltage under the particular experimental conditions used. There are 7 figures and 2 tables.

Card 3/3

EWP(1)/EWP(k)/EWT(k)/T/EWP(t) IJP(c) RM/DJ/JD SOURCE CODE: UR/0407/65/000/001/0020/0036 ACC NR. AP6000635 AUTHOR: Merkur'yev, A. N. (Mascow); Fechuro, N. S. (Moscow); Royter, L. A. (Moscow); Gol'din, V. I. (Moscow); Pesin, O. Yu. (Moscow) ORG: none TITLE: Media for precision electroerosion machining of metals SOURCE: Elektronnaya obrabotka materialov, no. 1, 1965, 20-36 TOPIC TAGS: electrocrosion machining, metal machining ABSTRACT: An experimental investigation of the effect of various interelectrode media on the process of electroerosion machining (EEM) of steels is described. Paraffin, naphthene, and aromatic hydrocarbons, mono, di-, and tri-atomic alcohols, polyethyl-siloxanes (No. 3 and No. 5 silicones) kerosine, Estonian shale resin, and green soar were tested. It was found that the electrode erosion and wear depend on the medium and the power-supply source used. The best results were obtained with No. 3 silicone and tetralin used with longer pulses; the specific erosion increased with the discharge energy which enhanced the power efficiency of the



ACC NR: AT7006847

SOURCE CODE: UR/0000/66/000/000/0164/0172

AUTHOR: Pechuro, N. S. (Professor, Doctor of technical sciences); Gol'din, V. I.; Merkur'yev, A. N.

ORG: none

TITLE: Decomposition of pure hydrocarbons during electroerosive machining using a dynamoelectric pulse generator

SOURCE: Moscow. Eksperimental'nyy nauchno-issledovatel'skiy institut metallorezhush-chikh stankov. Khimicheskiye reaktsii organicheskikh produktov v elektricheskikh razryadakh (Chemical reactions of organic products in electric discharges), Moscow, Izd-vo Nauka, 1966, 164-172

TOPIC TAGS: electroerosion, alkane, aromatic hydrocarbon, cyclohexane

ABSTRACT: The effect of various types of hydrocarbons used as interelectrode media (n-heptane, n-octane, n-decane, tetradecane, cyclohexane, benzene, o-xylene, tetralin) on the chemical reactions taking place during electroerosive machining was studied under conditions approximating those prevailing in the operation of making holes (d = 20 mm) in steel parts. The power source was an MIG-2B dynamoelectric generator with a pulse repetition frequency of 600 cycles. The physicochemical properties of the pure hydrocarbons were found to have a considerable effect on the characteristics of the process of electroerosive machining of the metal. Empirical equations are derived

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ACC NR: AT7006847

for the decomposition of the hydrocarbons. Thermodynamic calculations and results of oscillographic analysis showed that the energy expended on the chemical processes varies widely and amounts to 5.52-27.92% of the total energy of the pulse for paraffins and cyclohexane, 1.73-6.52% for benzene and o-xylene, and 10.02-11.36% for tetralin. The erosion of the anode and the total electrode wear increase in the series: cyclohexane, paraffin hydrocarbons, arcmatic hydrocarbons. Orig. art. has: 1 figure, 6 tables and 1 formula.

SUB CODE: 07,13/ SUBM DATE: none/ ORIG REF: 002/ OTH REF: 002

Cord 2/2

ACC NR: AT7006848

SOURCE CODE: UR/0000/66/000/000/0173/0180

AUTHOR: Merkur'vev, A. N.; Pesin, O. Yu.; Pechuro, N. S. (Professor, Doctor of technical sciences)

ORG: none

TITLE: Study of the decomposition in condensed discharges of liquid organic products used as interelectrode media in electroerosica machining of metals

SOURCE: Moscow. Eksperimental'nyy nauchno-issledovatel'skiy institut metallorezhush-chikh stankov. Khimicheskiye reaktsii organicheskikh produktov v elektricheskikh razryadakh (Chemical reactions of organic products in electric discharges). Moscow, Izd-vo Nauka, 1966, 173-180

TOPIC TAGS: electroerosion, aromatic hydrocarbon, alkane, cyclohexane

ABSTRACT: Experiments were carried out in order to determine the nature of the decomposition of pure organic compounds used as interelectrode media in electroerosive
machining when they are acted upon by condensed discharges. The compounds studied
were representatives of pareffins, naphthenes, and aromatic hydrocarbons (n-heptane,
n-octane, n-decane, n-tetradecane, benzene, o-xylene, tetralin, and cyclohexane).
The yield of gaseous decomposition products was found to depend substantially on the
type of medium. The maximum amount of gas was formed by the decomposition of paraffin
hydrocarbons, and the minimum by the decomposition of aromatic compounds. Relation-

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ACC NR: AT7006848

ships were established between the structure of the molecule being decomposed and the nature and amount of the products. Empirical decomposition equations were derived, and the fraction of energy consumed by the chemical reactions was determined. The dependence of erosion on the nature of the interelectrode medium is discussed. Orig. art. has: 6 tables.

SUB CODE: //,07,13/ SUBM DATE: none/ ORIG REF: 002

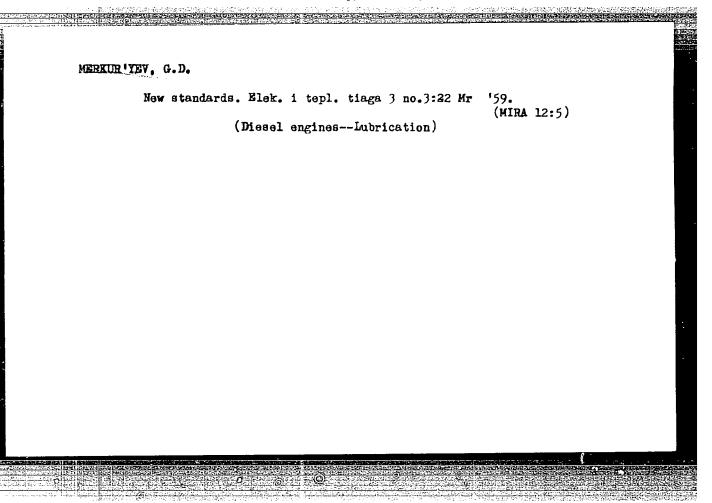
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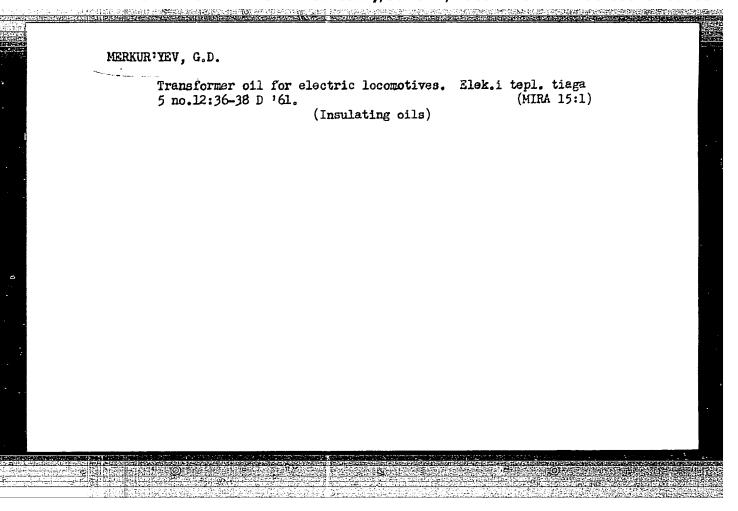
MERKUR'YEV, G.D..inzh.

Oil reclamation as an important means of improving the economy of diesel locomotive traction. Elek. i tepl. tiaga 2 no.2:21-22 F '53, (MIRA 11:4)

1. Glavnove upravleniye lokomotivnogo khozyaystva.

(Diesel locomotives) (Oil reclamation) (Diesel fuels)





VORONOV, Nikolay Mikhaylovich; BLIDCHENKO, Ignatiy Fadorovich; GONCHAROV, Viktor Mikhaylovich; LOBANOV, Vasiliy Vasil'yevich; MERKUR'YEV, Gennadiy Dmitriyevich; BLAGOVIDOV, I.F., kand. tekhn. nauk, retsenzent; EMINOV, Ye.A., inzh., retsenzent; GROMOV, G.N., inzh., retsenzent; LOSIKOV, B.V., prof., red.; SOBAKIN, V.V., inzh., red.; MEDVEDEVA, M.A., tekhn. red.

[Petroleum fuel and lubricants in railroad transportation; handbook] Neftianoe toplivo i smazochnye materialy na zheleznodorozhnom transporte; spravochnik. Moskva, Transzheldorizdat, 1962. 322 p. (MIRA 16:6) (Petroleum products) (Railroads--Fuel)

S/

AM4007083

BOOK EXPLOITATION

Merkur'yev, Gennadiy Dmitriyevich

Lubricants and their use in electric rolling stock (Smazochny*ye materialy* i ikh primeneniye v elektropodvizhnom sostave) Moscow, Transzheldorizdat, 63. 0125 p. illus., biblio. 5,000 copies printed.

TOPIC TAGS: lubrication, lubricating oil, electric traction, packing material

PURPOSE AND COVERAGE: The book contains brief information on the main physical and chemical properties of oils and lubricants, and a detailed description of the conditions under which lubricants can be used in rubbing parts of electric rolling stock. Norms for lubricant consumption are presented. The book is intended for mechanics specializing in electric rolling stock, their helpers, and the railroad yard repair personnel. Principal attention is paid to the quality of lubricating oil and its applications. General problems involving friction, oil refining, and manufacture of lubricating oil are mentioned only briefly.

TABLE OF CONTENTS [abridged]:

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	th. I. General information on friction and lubricants 4 th. II. Main physical and chemical properties of lubricating oils 19 th. III. Technical characteristics of lubricating and packing materials used in electric traction 30 th. IV. Lubrication of main rubbing parts of electric rolling stock 56 th. V. Recovery of used lubricating oil 100 th. VI. Organization of lubrication administration in an electric locomotive yard and norms of lubricating-material consumption 108 Appendices 114 Literature 127		
. !	SUB CODE: FL, PR	SUBMITTED: 04Feb63	NR REF SOV: 019
	OTHER: 000	DATE ACQ: 30Nov63	
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ا رو پاستان	Cord 2/2		

EV(T(m)/T)ACC NR. AP6030589 (AN) SOURCE CODE: UR/0413/66/000/016/0073/0073 INVENTOR: Ismailov, R. G. A. O.; Mamedov, M. A. A. O.; Spektor, Sh. Sh.; Seidov, M. M. M. O.; Vartapetov, A. A.; Shchelkonogov, I. A.; Kyazimov, A. A.O.; Aliyev, A. A. G. O.; Tangiyeva, T. A.; Kesel'man, L. G.; Lobanov, V. V.; Chikunov, V. A.; Blidchenko, I. F.; Tarumov, G. A.; Bombandirov, P. Merkur'yev, G. D.; Petrov, S. A. ORG: none TITLE: Lubricating oil for bushings. Class 23, No. 184997 SOURCE: Izob reteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 16, 1966, 73 TOPIC TAGS: lubricant, bushing, petroleum ABSTRACT: An Author Certificate has been issued describing a lubricant for bushings, with a solar fraction and mazut base. To expand the operating temperature range of the oil, a petroleum fraction with a boil-away of 4-5% at 240-320C is added to the lubricant. This fraction is obtained from the petroleum distillate at 300-310C. [Translation] SUB CODE: 11/ SUBM DATE: 05Nov64/ UDC: 629. 11. 012. 26

MERERIEV, G. M.

Cotton Carding

Reducing the irregularity of lap by changing the drawing in picking machines.,

Tekst. prom., 12, No. 3, 1952:

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

MERKUR'YEV, Gennadiy Sergeyevich; SAVOST'YANOV, Yevgeniy Ivanovich; MERIN, B.M., red.; MAKAROVA, N.F., tekha. red.

[Brigades and the shock workers of communist labor]Brigady 1 udarniki kommunisticheskogo truda. Moskva, Uchpedgiz, 1962.

(MIRA 16:3)

(Socialist competition) (Communist youth league)

USSR/ Electronics - Material testing Pub. 89 - 24/30 Card 1/1 Authors Merkur'yev, I. Title Gamma defectoscope Radio 1, 52 - 55, Jan 56 Periodical Abstract An account is given of the use of the penetrating property of gamma rays to locate hidden defects in metal parts. Two methods are described - one called the photographic method and the other the ionization method. The former produces a photographic image on which hollow places in an object are revealed through greater penetration of the rays, and the latter records their penetration on the Geiger counter principle. Technical details of the parts of the apparatus are given with directions for their assembly. Illustrations; diagrams; graphs. Institution: Submitted

MERKUR YEV, L

107-57-6-15/57

AUTHOR: Merkur'yev, I.

TITLE: Burning Issues (Nabolevshiye voprosy)
PERIODICAL: Radio, 1957, Nr 6, p 11 (USSR)

ABSTRACT: A new AF 20-watt amplifier designed by the author was displayed at the Ninth All-Union Exhibition of the Radio Amateurs. It won fourth prize. Its description was submitted to the Ministry of Communications; the Ministry never replied. A description of a new gamma-ray crack detector, submitted to the Ministry of Radio Engineering Industry, was shelved there for over five months; it was examined only after interference by public organizations. The author has designed over fifty various instruments during twenty years. He finds that very little attention is paid to the important matter of radio amateur inventions. Currently, he is developing a new portable dosimeter with AC supply, weight under 1 kg.

AVAILABLE: Library of Congress

Card 1/1

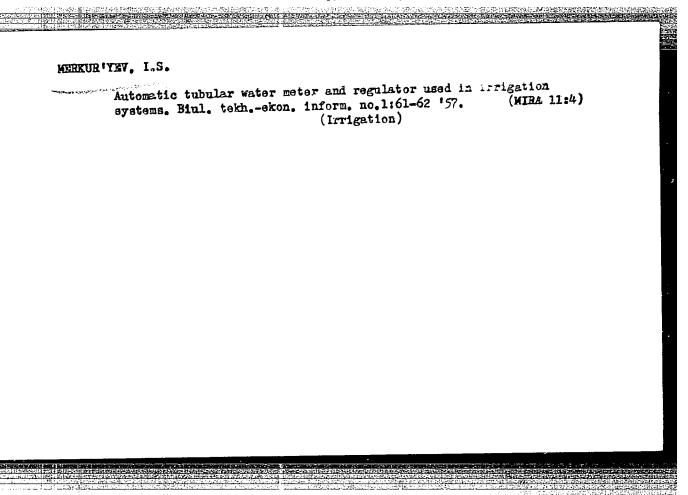
BOLOTOVSKAYA, T.P.; BOLOTOVSKIY, I.A., kand. tekhn. nauk, dots.;
BOCHAROV, G.S.; GULYAYEV, V.I.; KURLOV, B.A.; MERKURYEV,
I.A.; SHIRNOV, V.E.

[Handbook on the geometrical calculation of involute toothed and worm gears] Spravochnik po geometricheskomu raschetu evol'ventnykh zubchatykh i cherviachnykh peredach. [By] T.P. Bolotovskaia i dr. Moskva, Mashgiz, 1963. 472 p. (MIRA 17:4)

MERKUR YEV, I. S. Cand Tech Sci -- (diss) "Development of design and methods for the hydraulic calculation of automatic tubular water-meter regulators."

Mos, 1957. 23 pp with diagrams (Min of Agriculture USSR. VASKANIL. All-Union Improvement Sci Res Inst of Hydraulic Engineering and Mationakian), 100 copies (KL,5-58, 102)

-25-



98-58-3-13/22 AUTHOR: Merkur'yev, I.S., Candidate of Technical Sciences TITLE: Letters and Comments of the Readers (Pis'ma i otkliki chitateley, Hydraulic Resistances on Head Water Discharges (Gidravlicheskiye soprotivleniya na vkhod napornykh vodovypuskov) PERIODICAL: Gidrotekhnicheskoye Stroitel'stvo, 1958, Nr 3, pp 46 - 48(USSR) ABSTRACT; Based on a Bernoulli equation, calculations are presented to determine hydraulic resistances on head water discharges. The author critically appraises the calculations offered by I.A. Zababurin on the same problem. There are 2 graphs and 4 Soviet references. 1. Bernoulli equations-Applications 2. Fluid flow-Resistance-Card 1/1 Mathematical analysis

MERKUR'YEV, I.S., kand. tekhn. nauk

Automation of structures in irrigation systems. Gidr. i mel. 15 no.6:25-31 Je '63. (MIRA 16:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut gidro-tekhniki i melioratsii im. Kostyakova.

MERKUR'YEV, I.S., kand.tekhn.nauk

Lightweight hydrant-type sluice gates of irrigation systems with distributing pipelines. Gidr. i mel. 14 no.7.40-46 162. (MIRA 17:2)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut gidrotekhniki i melioratsii.

BELOSTOTSKIY, Anatoliy Avrumovich; VAL'DENBERG, Yuriy Stanislavovich; MERKUR'YEV, Leonid Ivanovich; Prinimal uchastiye DAVYDOVSKIY, A.K.; SHENBROT, I.M., red.

[Use of electronic computers in the automation of industrial processes] Primenenie vychislitel'nykh mashin dlia avtomati-zatsii proizvodstvennykh protsessov. Moskva, Energlia, 1964. 238 p. (MIhA 17:12)

"APPROVED FOR RELEASE: Wednesday, June 21, 2000

CIA-RDP86-00513R001033

АМ6004715

Monograph

UR/

Belostotskky, Anatoliy Avrumovich; Val'denberg, YUriy Stanislavovich; Merkur' yev, Leonid Ivanovich

Use of computers for the automation of production processes (Primeneniye vychislitel nykh mashin dlya avtomatizatsii proizvodstvennykh protsessov) Moscow, 9800 copies printed. 238 p. illus., biblio.

TOPIC TAGS: computer, automation equipment, industrial automation, automatic control system, automatic control, computer application

PURPOSE AND COVERAGE: The book is intended for a wide circle of technicians concerned with the automation of various production processes. It describes the basic problems involved in the use of computers for the control of these processes. Numerous examples taken from Soviet and foreign practice show the role and the position of control computers in different technological processes. Scientific and technical problems arising with the utilization of control computers, as well as trends in their development, are discussed. The main emphasis is placed on the use of control computers in chemistry, power engineering, metallurgy, and transportation. The introduction and chapters 1, 2 and 3 (except §§ 3-1 and 3-4) were introduction by Yu. S. Val'denberg, §§ 3-1 and 3-4 by A. K. Davydovskiy, written by Yu. S. Val'denberg, §§ 3-1 and 3-4 by A. K. Davydovskiy,

UDC 681.140

ACC NR: AM6004715 chapter 4 (except \$5 4-5) and \$5 6-3, 6-5, and 6-6 by L.I. Merkur' yev, chapter 5 and \$5 4-5, 6-1, 6-2, and 6-4 and the appendix by A. A. Belostotskiy. Materials on Soviet control computers were furnished by V. M. Kagan, B. N. Malinovskiy, N. I. Borodin, and G. I. Gil'man. TABLE OF CONTENTS: Ch. I. Automation and computers -- 9 1-1. Partial and full automation -- 9 1-2. Information-type computers -- 11 1-3. Computers which advise the operator -- 21 1-4. Control computers -- 31 1-5. Theoretical problems involved in the use of control computers -- 38 1-6. Some problems of control-computer designing -- 45 Ch. 2. Control computers in the chemical industry -- 50 2-1. Optimum control in chemical productions -- 50 2-2. Linear programming in controlling chemical processes -- 64. 2-3. Control of product-mixing processes -- 77 2-4. Control in oil refineries -- 85 Ch. 3. Control computers in power engineering -- 85 Card 2/4

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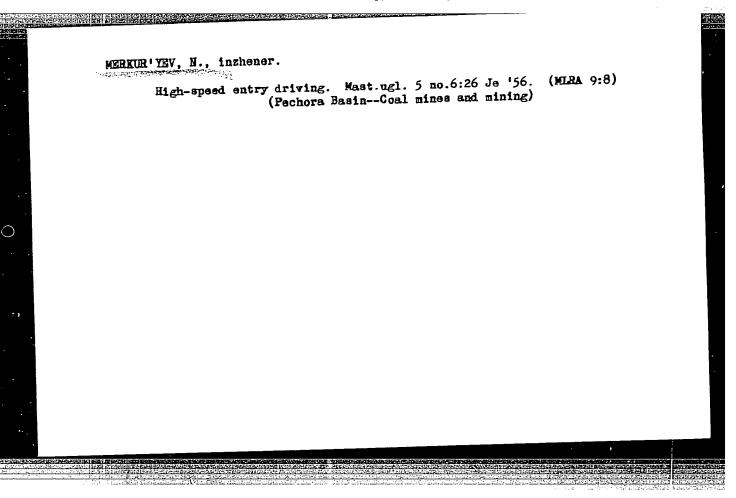
ACC NR: AM6004715

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6-4. UM-1 -- 213
6-5. "Stal'-2" -- 218
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Appendix: Characteristics of foreign control computers -- 227

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SUB CODE: 09/ SUBM DATE: 14Nov64/ ORIG REF: 058/ OTH REF: 043/



MERKUR' IEV, Nikolay Dmitriyevich; ABKEVICH, P.L., red.1zd-va; BYKOVA, V.V., tekhn.red.

[Prospecting for asbestos] Asbest i ego poiski. Moskva, Gos. nauchno-tekhn.izd-vo lit-ry po geologii i okhrane nedr, 1959. 26 p. (MIRA 13:7)

(Asbestos)

MERKUR'YEV, Mikolay Dmitriyevich; ABKEVICH, P.L., red. izd-va;
BYROVA, V.V., tekhn. red.

[Asbestos and searching for it]Asbest i ogo poicki. Izd.2.
Moskva, Gosgooltekhizdat, 1962. 23 p. (MIR& 15:11)

(Asbestos)

MERKUR'THY, N.D. (Moskva)

Problems of prevention and treatment of thromboembolism in the system of the pulmonary artery. Klin.med. no.4:148-151 '62. (MIKA 15:5)

(PUIMONARY EMBOLISM)

MERKUR'YEV, N.D.; SUDERKIN, A.I.

Specific features of prospecting for deposits of piezooptical raw materials. Razved. i okh. nedr 27 no.1:15-18 Ja '61. (MIRA 17:2)

1. Vsesoyuznyy nauchno-issledovatel's iy institut p'yezooptiches-kogo syr'ya.

112-1-1421

Translation from: Referativnyy Zhurnal, Elektrotekhnika, 1957,

Nr 1, p. 215 (USSR)

AUTHOR:

Merkur'yev, N.K.

TITLE:

Mechanization of Production Operations at the Plant "Proletariy" (Mekhanizatsiya proizvodstvennykh protsessov na zavode "Proletariy")

PERIODICAL: Inform. tekhn. sb. M-vo elektrotekhn. prom-sti SSSR,

1956, Nr 5 (89), pp.13-18.

ABSTRACT:

Bibliographic entry

Card 1/1

5/196/61/000/011/014/042 E194/E155

AUTHORS :

Bukhman, G.D., and Merkur yev, P.T.

TITLE

A luminescent method for finding leaks in (steam)

condensers

PERIODICAL; Referativnyy zhurnal, Elektrotekhnika i energetika

no.11, 1961, 28, abstract 11G 166 (Elektr.

stantsii, no.4, 1961, 86-87)

Experience with the method in high- and medium-pressure TEXT: power stations of the Sverdlovenergo system is described, luminophores used were (I) fluorescine, and (II) sodium fluorescinate. Because of the poor solubility of (I), caustic soda is added to the water when it is used. In preparing the condenser for hydraulic testing, a quarter of the volume of the steam space is filled with water, then solution (II) is added, after which the condenser is filled with water to above the tube level. The condenser pump is operated through the recirculation line for 25-30 minutes to ensure good mixing of the solution, The fluorescine concentration should be greater than 5 mg/litre,

Card 1/2

A luminescent method for finding 5/196/61/000/011/014/042 E194/E155

When looking for leaks the lamp should be moved along the tube plate from top to bottom at a distance of 50 70 mm from the tubes in a darkened water chamber. Solution which escapes through small leaks in the tube system shines with a bright vellow green colour. Lamp type \$10.45 (UFO-4A) with glass grade \$10.6 (UFS-6) was used. Supply was at 12 V a.c. The test lasted 4 to 8 hours.

[Abstractor's note: Complete translation]

Card 2/2

MERKUR'YEV, S.A.

Put the use of mineral fertilizers under control. Zemledelie 27 no.5:81 My *65. (MIRA 18:6)

1. Predsedatel Trkutskogo oblastnogo komiteta partiyno-gosu-darstvennogo kontrolya.

YEMEL'YANOV, V.P.; SKROBOV, V.; KONDYBKO, P.; ILYUKOVICH, B.M.; MERKUR'YEV, S.Ye.; SARAPULOV, Yu.V.

In the country's rolling mills. Metallurg 9 no.12:34-35 D '64.
(MIRA 18:2)

1. Magnitogorskiy metallurgicheskiy kombinat (for Yemel'yanov).
2. Zavod "Krasnaya Etna" (for Skrobov, Kondybko). 3. Chusovskoy metallurgicheskiy zavod (for Ilyukovich, Merkur'yev). 4. Cherepovetskiy metallurgicheskiy zavod (for Sarapulov).

ILYUKOVICH, B.M.; MERKUR'YEV, 9. Ye.

Rolling special lighweight shape O2OB1 wheel rims for the GAZ 53 automobile. Metallurg 10 no.4:26-27 Ap '65. (MIRA 10:7)

1. Chusovskoy metallurgicheskiy zavod.

ILYUKOVICH, B.M., starshiy kalibrovshchik; MERKUR'YEV, S.Ye., kalibrovshchik

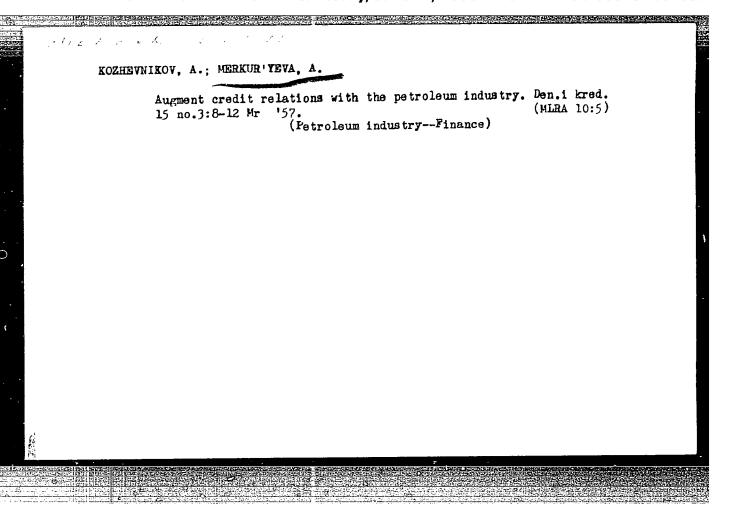
Rolling of special sections for the screens of jigging
machinery. Metallurg 10 no.5:30-31 My '65. (MIRA 18:6)

1. Chusovskoy metallurgicheskiy zavod.

YEMEL'YANOV, V.P.; ILYUKOVICH, B.M.; MERKUR'YEV, S.Ye.; FCMENEO, G.G.

In the rolling mills of the land. Metallurg 10 nc.12:38 5 '65.
(MIRA 18:12)

1. Chusovskiy metallurgicheskiy zavod (for Ilyukovich, Merkur'yev).



22571 S/190/61/003/005/014/014 B110/B230

15 9202 2209, 1436, 1474

AUTHORS: Yerusalimskiy, B. L., Merkur'yeva, A. V., Baykova, N. P.

TITLE: Polymerization of chloroprene under the influence of organo-

metallic compounds

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 3, no. 5, 1961, 798

TEXT: Data published on the polymerization of chloroprene by methods other than initiation by free radicals disclose nothing about polymerization in the presence of conventional organometallic compounds. The present authors found the polymerization of chloroprene under the influence of organolithium and organomagnesium compounds to be possible. Butyl lithium and the system $\begin{bmatrix} C_4H_9MgI + (C_4H_9)_2Mg\end{bmatrix}$ were used as initiators of polymerization. This system, formed in the course of the organomagnesium synthesis in hydrocarbon, has already been applied together with other organomagnesium compounds for the polymerization of isoprene. Under the influence of the system butyl magnesium iodide - dibutyl magnesium the polymerization of chloroprene takes place at a considerable rate between 40 and 60°C. At a concentration of the initiator of 0.012 to 0.025 and of the Card 1/2

X

22571

S/190/61/003/005/014/014 B110/B230

Polymerization of ...

monomer of 2.5 moles/1, conversion amounts to ~5 per cent per hour at 60°C at the beginning of the reaction. Applying butyl lithium and a concentration of the initiator of 0.008 and of the monomer of 4.0 moles/1, conversion is 2 per cent per hour at 35°C at the beginning of the reaction. Polymers obtained in hexane under the conditions described are soluble in benzene to a limited extent (~50 per cent). Temperature of vitrification varies from -46 to -50°C for the individual specimens. [Abstracter's note: Essentially complete translation]. There are 4 references: 1 Soviet-bloc and 3 non-Soviet-bloc.

SUBMITTED: January 28, 1961

Card 2/2

S/190/62/004/009/005/014 B101/B144

AUTHORS:

Dolgoplosk, B. A., Yerusalimskiy, B. L., Kavunenko, A. P.,

Merkur'yeva, A. V.

TITLE:

Polymerization of diene hydrocarbons under the action of organomagnesium compounds

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 4, no. 9, 1962, 1333-1337

TEXT: The polymerization of butadiene (I), 2,3-dimethyl butadiene (II), and chloroprene (III) by the system $(C_4H_9)_2Mg - C_4H_9MgI$ was studied under the same conditions as that of isoprene described previously (Vysokomolek. soyed., 2,541,1960). Results: (1) A solution of 25 - 30 mole% I in hexane yielded ~10% polymer with 77 - 75% 1,4 bonds at 100°C. Under the same conditions, II yielded ~40% polymer with 97% 1,4 bonds. The polymerization proceeds more slowly than that of isoprene. The polymers are completely soluble in benzene and have lost ~6-3, of their double bonds. It is assumed, therefore, that an intramolecular cyclization occurs. (2) The polymerization of III in hexane at 40 - 60°C yielded up to 20% polymer. The polymers had limited solubility in benzene, and their glass transition Card 1/2

Polymerization of diene...

S/190/62/004/009/005/014 B101/B144

point was -46 to -49°C. (3) The consumption of organomagnesium initiators during the polymerization of isoprene was studied. The content in C_4H_{10} liberated by H_2SO_4 was determined chromatographically. The continuous decrease in initiator concentration and the continuous increase in molecular weight during the reaction suggest a consecutive organometal synthesis. Monomer addition to the C-Mg bond is comparatively slow. There are 1 figure and 4 tables.

ASSOCIATION:

Institut vysokomolekulyarnykh soyedineniy AN SSSR (Institute of High-molecular Compounds AS USSR)

SUBMITTED:

May 20, 1961

Card 2/2

"MERKURIYEVA, L. A.

79 1-23/93

AUTHORS:

Bal'yan, kn. V., Lerman, Z. A., Herkur'yeva, L. A.

TITLE:

Mydrogenation in the Presence of Colloidal Palladium (Gidri

rovaniye v prisutstvii kolloidal'nogo palladiya)

IX. Hydrogenation of Vinylpropyl- and Vinylbutyl-Acetylene (IX. Gidrirovaniye vinilpropil - i vinilbutilatsetilenov)

PERIODICAL:

Zhurnal Chshchey Khimii, 1950, Vol.20, Mr 1, pp.110-116(USSR)

ABSTRACT:

One of the authors earlier investigated the hydrogenation of two close homologues of vinylacetylene, namely vinylmethyland vinylethyl-acetylene. It was of interest to test the same reaction also on other derivatives of vinylacetylene with a longer chain of atoms. For this purpose the authors hydrated vinylpropyl- and vinylbutyl-acetylene in the presence of colloidal palladium. The hydrogenation products were separated from the initial product and the mixture of olefines and diolefines brominated. According to the quantity of di- and tetra-bromides separated by vacuum distillation it was possible to conclude the proportional quantity of olefines and

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CIA-RDP86-00513R001033 APPROVED FOR RELEASE: Wednesday, June 21, 2000

75-1-23/63

Hydrogenation in the Presence of Colloidal Palladium. IX. Hydrogenation of Vinylpropyl- and Vinylbutyl-Acetylene

diolefines. The physical constants of the ozonolysis and the condensation with malein-acid anhydride gave information on the structure of the olefines and diolefines regenerated with zinc from the bromides. According to the nature of the curve which gives the velocity process it can be seen that the hydrocarbons to be investigated are almost not different from their earlier investigated homologues, vinylmethyl- and vinylethyl-acctylene (sec diagram). On the basis of the investigations it was thus determined that in the hydrogenation of vinylpropyl- and vinylbutyl-acetylene in the presence of colloidal palladium the addition of hydrogen takes place in the same manner as in vinylmethyl- and vinylethyl-acetylene i.e. at the triple bond, the further hydrogenation of the developing dienes to the corresponding ethylene hydrocarbons taking place simultaneously. It was found that the addition of a small amount of p-chlorobenzene thiocyanate increases the selection of the hydrogenation process. Octadiene-1,3; 1,2,3,4-tetrabromoheptane and tetrabromooctane were characterized for the first time; the exact constants for hertadiene-1,3 were described. There are 1 figure, 2 tables, and

Card 2/3

79-1-23/63 Hydrogenation in the Presence of Colloidal Palladium. IX. Hydrogenation of Vinylpropyl- and Vinylbutyl-Acetylene

9 references, 7 of which are Slavic,

ASSOCIATION: Leningrad Technological Institute imeni Lensovet

(Leningradskiy tekhnologicheskiy institut im. Lensoveta)

SUBMITTED: January 4, 1957

AVAILABLE: Library of Congress

Card 3/3 1. Chemistry 2. Hydrocarbons 3. Mathematical analysis

USSR/Form Animals. Cattle.

Q

Abs Jour: Ref Zhur-Diol., No 17, 1958, 78728.

Author : Merkun yeva, M. Koledov, A.F.

Inst : Altay Kray Scientific-Research Veterinary Station.

Title : On Periods of Mating of Cows After Calving.

Orig Pub: Sb. mauch. rabot. Altaysk. kraysvoy n.-i. vet. st.,

1957, vyp. I, 192-197.

Abstract: No abstract.

Card : 1/1

24

BAKULEV, A.N.; STEPANYAN, A.N.; MERKUR'YEVA, R.V.

Chemical, electrophoretic and chromatographic examination of carbohydrates bound with blood serum proteins in coronary insufficiency before and after surgical interventions, Kardiologiia 1 no.5:22-29*61 (MTRA 17:4)

STEPANYAN, Ye. P., prof.; MERKUR'YEVA, R.V.

Electrophoretic and chromatographic analysis of glycoporoteins in the blood serum of patients with defect of the mitral valve. Terap. arkh. 34 no.10:84-89 0*62 (MIRA 17:4)

l. Iz biokhimicheksoy laboratorii (zav. - prof. Ye.P. Stepan-yan) Instituta serdechno-sosudistoy khirurgii (dir. - prof. S.A. Kolesnikov) AMN SSSR; nauchnyy rukovoditel' - akademik A.N. Bakulev.

S/020/62/147/005/032/032 B144/B186

AUTHORS:

Stepanyan, Ye. P., Merkur'yeva, R. V., Geselevich, Ye. L.

TITLE:

Experimental study of metabolic acidosis in deep hypothermia

PERIODICAL:

Akademiya nauk SSSR. Doklady, v. 147, no. 5, 1962, 1250-1252

TEXT: Since narcosis with hypothermia produces often metabolic acidosis, it was important to clear up the role of hypothermia in itself. This was done by determining in heart, brain, skeletal muscles and suprarenal glands of narcotized dogs (temperature in the mediastinum 10°C) the contents of lactic, pyruvic and ascorbinic acids, the glycolysis, the content of protein and its fractions, the blood viscosity, the electrolytes, the pH, and the blood sugar. The tests were conducted in 3 groups: blood circulation interrupted for 30 min (I); for 60 min (II); for 30 min followed by warming to 37°C (III). Results: (I) The lactic acid content dropped in heart and suprarenal glands and increased in brain and muscle. Glycolysis changed in the same sense with exception of the muscle. (II) Marked increase of lactic acid content and glycolysis in heart and brain. (III) Maxima of both levels in the brain. In the Card 1/2

Experimental study of metabolic ...

S/020/62/147/005/032/032 B144/B186

brain aerobic glycolysis was observed also. This is explained by adaptation reactions. A blood sugar content up to 300 mg-% and a pH shift toward acid values were observed with maximum cooling, both returning gradually to normal values with the restoration to normal body temperatures. The protein analysis revealed hypoproteinemia with reduction of the albumins and increase of α_1 , α_2 and μ globulins. The blood

viscosity was also reduced. The changes in pyruvic acid and electrolytes were insignificant. The ascorbinic acid level dropped initially in all tissues, it then increased sharply after 60 min in the suprarenal glands and in all tissues after warming-up to 37°C. This again is attributed to adaptation. It is concluded that metabolic acidosis is not due to hypothermia proper, but to interruption of the blood circulation and to warming-up. There are 2 figures.

ASSOCIATION:

Institut serdechno-sosudistoy khirurgii Akademii

meditsinskikh nauk SSSR (Institute of Cardio-vascular Surgery of the Academy of Medical Sciences USSR)

PRESENTED:

May 21, 1962, by A. N. Bakulev, Academician

SUBMITTED:

May 21, 1962

Card 2/2

MERKUR'4EUA, R.V.
AID Nr. 976-1 24 May

TISSUE RESPIRATION AND ADENOSINETRIPHOSPHATASE ACTIVITY IN DOGS IN DEEP HYPOTHERMIA (USSR)

Stepanyan, Ye. P., R. V. Merkur'yeva, and Ye. L. Geselevich. Byulleten' eksperimental'noy biologii i meditsiny, v. 55, no. 3, Mar 1963, 45-48.

S/219/63/055/003/001/001

A study was made on the effects of deep hypothermia on the tissue respiration and adenosinetriphosphatase activity in the brain, heart, adrenals, and skeletal muscles of mongrel dogs. Extracorporeal cooling to 10°C in the mediastinum and subsequent warming of the hypothermic animals by means of an apparatus filled with blood at 0°C and 37°C, respectively, was completed in 10 to 15 min. Three series of experiments were conducted. The blood circulation was arrested for 30 min in series (I) and for 60 min in series (II); in series (III) the animals were rewarmed to normal temperature after a 30-min circulatory arrest. Deep hypothermia caused marked changes in the tissue respiration, particularly in the brain tissue, manifested by diminished consumption of oxygen (17% of the normal) and reduced excretion of carbon dioxide (12.5% of the normal); profound disturbances in the decarboxylation

Card 1/2

AID Nr. 976-1 24 May

TISSUE RESPIRATION [Cont'd]

8/219/63/055/003/001/001

processes were noted. The activity of adenosinetriphosphatase all tissues, particularly in the brain tissue, was reduced by deep cooling. Changes in tissue respiration were almost identical in series I and II. Enzyme activity in the cardic and skeletal muscles was affected by the length of the circulatory arrest (It was more inhibited by the 60-min arrest in series II). The changes in the enzyme activity in the brain tissue were almost identical in series I and II. Rewarming of the hypothermic animals and incubation of the cooled tissues at 37°C increased the tissue respiration and adenosinetriphosphatase activity in all tissues. The data obtained show that changes induced by deep by pothermia are reversible.

Card 2/2

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Ans Jour: Ref Zhur-Biol, No 5, 1958, 21417

: Merkur'yeva Ye K., Kudryashov N. V., Zvaygzne G. F., Author

Kuznetsov N. V.

Inst

: The Breeding of Cattle of the Jersey Breed (Razvede-Title

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Orig Pub: Zhivotnovodstvo, 1957, No 6, 60-69

Abstract: In order to increase the fat-milk production of East Friesian crossbred cattle by way of interbreeding

with sires of the Jersey breed, Jerseys were brought into the USSR in 1955. 110 heifers and 3 young bulls were sent to the state farm "Nekrasovo" in the Ryazan' Oblast. During a period of one year, 105 heifers produced 107 calves which developed well and possessed early sex maturity, a characteristic trait of

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East Friesians - 846 and 27.7 kg., respectively. In

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USSR / Farm Animals. General Problems

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Abs Jour: Ref Zhur-Biol., No 5, 1958, 21417

Abstract: 28 Jersey cows, the fat content of milk reached 6.8%. The Jersey cattle brought in descended from several inbred lines (III-II and nearer), as well as from inter-line crosses. The Jersey cows, under conditions prevailing in the Ryazan' Oblast, retained the characteristics of their breed, i.e. milk fat production, steadiness of milk yield and early maturity. They developed well.

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